

Penile manipulation: The most common etiology of penile fracture at our tertiary care center

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ABSTRACT

Penile fracture is the disruption of the tunica albuginea with rupture of the corpus cavernosum secondary to blunt trauma to the erect penis. It is an unusual condition, usually underreported. According to the published literature, vigorous vaginal intercourse with women on top position is the most common etiology across the globe including India with Middle Eastern countries being the exception. A total of seven patients of penile fracture presented in emergency in the last 6 months. The etiology was penile manipulation at the time of sexual excitement in six out of seven patients of penile fracture, which was contrary to the literature published except in Middle Eastern countries. All the patients were managed by emergency exploration and repair. Thus, the incidence and etiologies of penile fracture vary according to geographic region, sexual behavior, marital status, and culture.

Keywords: Corpus cavernosum, penile fracture, tunica albuginea

Introduction

Penile fracture is a relatively uncommon clinical condition that usually causes fear and embarrassment for the patient resulting in delayed search for medical assistance, which can lead to an impairment of sexual and voiding functions.^[1] Vigorous vaginal intercourse with women on top position is considered as the most common etiology.^[2]

Penile fracture is an emergency urological condition. Diagnosis is almost complete by mere clinical examination and investigations are really required.

Prompt diagnosis and immediate surgery are mandatory to avoid erectile dysfunction and abnormal curvature, which are the typical complications of conservative treatment. Unfortunately, due to the social and personal inhibitions and shyness, men may delay seeking medical help immediately.^[3] This is more so in developing countries due

to illiteracy, poverty, ignorance, living in remote places, poor transportation, etc.

The incidence of penile fracture is greater in Middle Eastern and North African countries (almost 55% of the total number reported) than in the USA or Europe (almost 30% of those reported).^[4]

In Middle Eastern countries, the most common cause of penile fracture is taghaandan, a type of penile manipulation, while in other parts of the world, trauma to the erect penis during vaginal intercourse is reported to be the most common.^[5] Literature from India showed that vaginal intercourse is the most common cause of penile fracture.^[6] We in the tertiary care hospital in North East part of India observed penile manipulation as the most common etiology of penile fracture.

Case Report

A total of seven patients of penile fracture presented in emergency in last 6 months at our center which is a Tertiary Care Hospital in North East part of India. Of seven patients that we observed

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during this period, six gave a history of penile manipulation during masturbation. Details of the patient's presentation and intraoperative findings are shown in Tables 1 and 2. Five patients were below 40 years of age, 4 were unmarried, and 1 was divorced. Five of them presented within 24 h period whereas other two presented between 24 and 36 h. Crackling sound was observed in six and pain, eggplant deformity [Figure 1], and discoloration were present in all patients. No patient had blood at meatus, and palpable defect [Figure 2] was found in two patients. After taking written and informed consent, all patients were managed by emergency exploration and repair. Intraoperative findings showed that the size of defect in the majority of patients were between 1 and 2 cm, 6 were having oblique laceration on a ventrolateral aspect of tunica albuginea and corpora cavernosum whereas one on the dorsolateral aspect. Hematoma size was between 3 and 5 cm in largest diameter in majority of the patients. Active bleeding

from corpus cavernosum was present in two cases, but no patient had any associated corpus spongiosum or urethral injury. In all the cases, defect was repaired using 3-0 polyglactin suture after the evacuation of hematoma and achieving hemostasis. The patients were advised to avoid all kind of penile manipulation or sexual intercourse for 4–6 weeks. All the patients recovered well without any residual deformity.

On a follow-up of 6 months, all patients showed satisfactory recovery.

Discussion

Penile fracture is a condition that is under-reported and hidden probably because of social embarrassment and cultural characteristics. True incidence of penile fracture is neither known



Figure 1: Eggplant deformity



Figure 2: Blue arrow shows defect in corpus spongiosum

Table 1: Demography and clinical presentation

Age (years)	Time of presentation (h)	Etiology intercourse/ bending of penis	Crackling sound	Pain	Swelling/eggplant deformity	Discoloration	Blood at meatus	Palpable defect
45	26	Bending of penis	-	+	Swelling + deformity	+	-	-
46	18	Vaginal intercourse	+	+	Swelling + deformity	+	-	+
25	6	Bending of penis	+	+	Swelling only	+	-	-
27	18	Bending of penis	-	+	Swelling + deformity	+	-	-
32	3	Bending of penis	+	+	Swelling only	+	-	+
23	32	Bending of penis	+	+	Swelling + deformity	+	-	-
30	5	Bending of penis	+	+	Swelling + deformity	+	-	-

+: Present; -: Absent

Table 2: Intraoperative findings

Defect site	Size of the defect (cm)	Hematoma size (cm)	Active bleeding	Corpus cavernosum involvement	Corpus spongiosum involvement	Associated urethral injury
VL	1.5	3	-	+	-	-
VL	2.0	5	-	+	-	-
VL	1.5	3	+	+	-	-
DL	1.5	3	-	+	-	-
VL	1.25	4	-	+	-	-
VL	1.0	3	-	+	-	-
VL	1.5	4	+	+	-	-

VL: Ventrolateral; DL: Dorsolateral; +: Present; -: Absent

in India nor in Western countries.^[7] Injury at the time of coitus is regarded as the most common predisposing factor for penile fracture.^[6]

In flaccid state, penis allows a significant degree of deformation without any injury to the vital structures, but in erected state, it is vulnerable to blunt injury. The tunica albuginea is a structure of great tensile strength that is able to withstand rupture at pressures up to 1500 mmHg. As the penis changes from a flaccid state to an erect state, the thick tunica albuginea becomes very thin from 2 mm to 0.25–0.5 mm; the tunica albuginea thins, stiffens, and loses elasticity and becomes easily fractured.^[8]

Trauma sustained during sexual intercourse is reported as the main cause of penile fracture in the world, and manipulating the erect penis to achieve detumescence is reported as a major cause in the Middle East.^[5] Majority of the patients in our study were young adults with five out of seven unmarried, were living in the conservative community, and sustained the trauma due to hard penile manipulation while masturbating, as it was the easiest available option to attain sexual pleasure.

Rupture of the tunica albuginea is usually unilateral and transverse. The rupture occurs more often in the proximal shaft and is located ventrally in coital injuries.^[9] In our study, we found unilateral in all cases with slightly oblique and more on the lateral aspect in majority of the cases.

The incidence of concomitant urethral injury is 10–38% and occurs more commonly with a bilateral cavernosal tear.^[10] However, the frequency of urethral involvement was between 0% and 3% in the Middle Eastern studies where penile manipulation is the most common etiology.^[5] In our study also, as majority were because of penile manipulation, we did not find any associated corpus spongiosum or urethral injury.

Thus, it can be concluded that trauma to an erect penis is essential for the occurrence of fracture penis. Etiology may vary from region to region depending on the sociocultural characteristics, marital status, masturbation habits, and indulgence in sexual

activities. In North Eastern part of India with a conservative society, penile manipulation during masturbation is considered as the most common cause of penile fracture in young adults.

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Conflicts of interest

There are no conflicts of interest.

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